

## IUBMB Enzyme Nomenclature

**EC 2.3.1.41**

**Recommended name:** 3-oxoacyl-[acyl-carrier-protein] synthase

**Reaction:** acyl-[acyl-carrier protein] + malonyl-[acyl-carrier protein] =  
3-oxoacyl-[acyl-carrier protein] + CO<sub>2</sub> + [acyl-carrier protein]

**Other name(s):**  $\beta$ -ketoacyl synthetase;  $\beta$ -ketoacyl-ACP synthetase;  $\beta$ -ketoacyl-acyl carrier protein synthetase;  $\beta$ -ketoacyl-[acyl carrier protein] synthase;  $\beta$ -ketoacylsynthase; condensing enzyme; 3-ketoacyl-acyl carrier protein synthase; fatty acid condensing enzyme; acyl-malonyl(acyl-carrier-protein)-condensing enzyme;  $\beta$ -ketoacyl acyl carrier protein synthase

**Systematic name:** acyl-[acyl-carrier-protein]:malonyl-[acyl-carrier-protein]  
C-acyltransferase (decarboxylating)

**Links to other databases:** [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number:  
9077-10-5

**References:**

1. Alberts, A.W., Majerus, P.W. and Vagelos, P.R. Acetyl-CoA acyl carrier protein transacylase. *Methods Enzymol.* 14 (1969) 50-53.
2. Prescott, D.J. and Vagelos, P.R. Acyl carrier protein. *Adv. Enzymol. Relat. Areas Mol. Biol.* 36 (1972) 269-311. [Medline UI: [73004927](#)]
3. Toomey, R.E. and Wakil, S.J. Studies on the mechanism of fatty acid synthesis. XVI. Preparation and general properties of acyl-malonyl acyl carrier protein-condensing enzyme from *Escherichia coli*. *J. Biol. Chem.* 241 (1966) 1159-1165. [Medline UI: [66132520](#)]

[EC 2.3.1.41 created 1972]

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